

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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FLOYD, et al.,

Plaintiffs,

-against-

CITY OF NEW YORK, et al.,

Defendants.

**DECLARATION OF ROBERT M.
PURTELL IN OPPOSITION TO
PLAINTIFFS' MOTION TO EXCLUDE
CERTAIN OPINIONS OF
DEFENDANTS' PROPOSED EXPERT,
DENNIS SMITH**

08 Civ. 1034 (SAS)

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ROBERT M. PURTELL, declares, pursuant to 28 U.S.C. § 1746, under penalty of perjury, that the following is true and correct:

1. I am an Assistant Professor of Finance and Director of the Masters in Public Administration Program at the University at Albany, Nelson A. Rockefeller College of Public Affairs & Policy.. I have previously submitted a declaration in this case, dated February 16, 2012 ("02/16/12 RP Decl."), in support of Defendants' motion to preclude all expert reports and opinions of Jeffrey Fagan, Ph.D ("Fagan"); a copy of my current curriculum vitae is thereto as Exhibit A.¹ In addition, as described below and in the 02/16/12 RP Decl., I assisted Dennis Smith, Ph.D. ("Smith") with certain of his analyses submitted in this case.² I submit this

¹ I am informed that the 02/16/12 RP Decl. is in the record before the Court as Dkt # 194.

² I am informed that Smith's analyses are in the record before the Court as follows: Report of Dennis C. Smith, Ph.D., dated November 15, 2010 ("Smith Report"), at Exhibit B of Declaration of Darius Charney, dated June 26, 2012 ("06/26/2012 Charney Decl"), in support of plaintiffs' motion to exclude certain opinions of defendants' proposed expert, Dennis Smith (Dkt # 217); Declaration of Dennis C. Smith, dated December 19, 2011 ("12/19/11 DS Decl."), in support of Defendants' motion to preclude all expert reports and opinions of Jeffrey Fagan, Ph.D ("Fagan")

Continued...

Declaration in opposition to Plaintiffs' motion to preclude certain of Smith's expert opinions.³ I have personal knowledge of the facts contained herein based on my experience.

2. I have worked with Smith on various research projects and publications since 2006, assisting him in creating statistical models to analyze the relationships among whatever variables he is investigating; the statistical models we have utilized in our work have been multiple regression models. Smith takes the lead in defining the situation that his study seeks to address and I assist him in converting that understanding into the underlying statistical model that will be used to do the analysis. To define the situation, Smith brings to bear his significant statistical training and knowledge of policing practices to develop, interpret and evaluate the appropriateness of the statistical models we plan to use. This is a critical stage in the process, as models must correctly identify and operationalize - convert the concepts into measures that can be used to accurately portray - the variables of interest.

3. Smith leads the model development process, assists in model selection and reads and interprets results. The model development process involves two steps. First, we jointly determine what variables are to be included in the model, including the variables of interest and those representing plausible alternative explanations of the hypothesis being tested, and translate that into the regression equations that will be used in the analysis. The second step involves choosing the correct statistical method we will use to estimate the parameters of the model. That

("Defs.' Mot.") (Dkt # 181); the Reply Declaration of Dennis C. Smith, dated February 16, 2012 ("02/16/12 DS Reply Decl."), in further support of Defs.' Mot. (Dkt # 193).

³ I am informed that the relevant moving papers on this issue are in the record as follows: Plaintiffs' Notice of Motion to Exclude Certain Opinions of Defendants' Proposed Expert, Dennis Smith ("Pls.' Mot.") (Dkt # 215); Plaintiffs' Memorandum of Law in Support of Pls.' Mot. ("Pls.' Mem.") (Dkt # 216); 06/26/2012 Charney Decl. in Support of Pls.' Mot. (Dkt # 217).

process involves deciding what estimation model to apply and whether additional adjustments must be made to develop reliable estimates of the parameters in the model. This is where decisions about using logistic regressions, negative binomial models, generalized least squares, difference in difference models or other alternative estimation techniques are made. For technical reasons, differences in model structure, the specification of the variables and issues related to data structure dictate the range of alternative ways that the parameters for a specific model can be estimated. In making these decisions, I discuss with Smith the relative strengths and weaknesses of each of the alternative estimation methods.

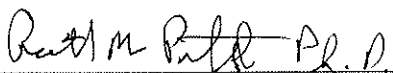
4. Ultimately, regression results provide insights into how things relate to each other but they do not prove causality. It is very easy for misspecified regression models to produce spurious relationships between variables which lead to erroneous conclusions. For example, while regression analysis has documented a meaningless relationship between occurrence of sun spots and stock market performance, there is no causality between the two. Thus, a properly structured model must reflect reality to the extent possible. It must include not only the variable that is being evaluated, but also all reasonable alternative explanations for the dependent variable (the thing that the model is trying to relate to the factors in the analysis). In this case, we found that Fagan's model failed to reflect reality in that it failed to consider an alternative explanation for the racial pattern of stops by the NYPD – that is, the relationship between crime and race, which Smith identified. Here, as in all of our collaborations, Smith undertakes the final review to make sure that the model meets these criteria by bringing to bear his expertise and knowledge of policing and social science.

5. An example of how Smith's expertise in policing is essential to the modeling process is evident during our preliminary review of results from a regression analysis. Smith's

experience in policing enables him to highlight findings that are inconsistent with theory and experience. When those situations arise, we go back to the model to look for why those inconsistencies might have occurred and whether they are legitimate or the result of a modeling error. In this process, Smith is uniquely qualified to opine on the appropriateness of the model to the policing context and to comment on the scope of reasonable alternative explanations that must be included to insure that a model reasonably reflects the situation being evaluated.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed on July 24, 2012, in Albany, New York.

Dated: Albany, New York
July 24, 2012



Robert M. Purtell